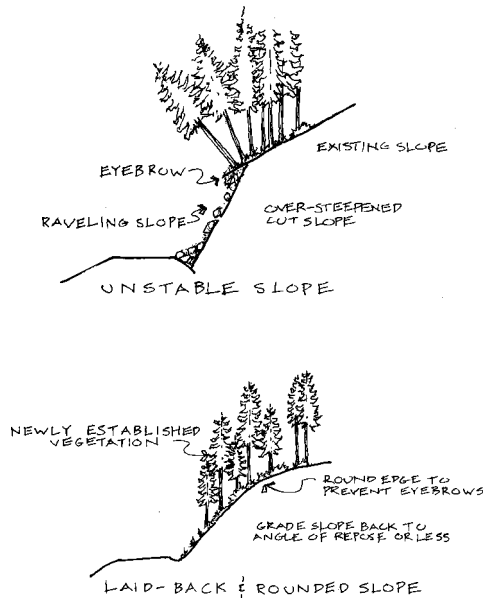


This section of the guidelines is intended to address issues related to the construction and preparation of slopes adjacent to the road.



Grade slopes back to the angle of repose or flatter. Round top of cut bank to create a natural appearance and to prevent an "eyebrow" that would be unstable.

- Grade slopes back to the angle of repose or flatter. Round top of cut bank to create a natural appearance and to prevent an "eyebrow" that would be unstable. This technique may not be appropriate if the slopes in question are extremely high.
- Avoid cutting rock faces if possible. If a cut must be made, remove the excess rock along natural fracture planes. Avoid visible drill marks. Explore opportunities for creating planting pockets. Treat raw faces with some type of accelerated weathering agent that gives the rock a natural weathered look.
- New grading should blend with and preserve the natural landforms and features of the area. Avoid grading and construction practices that disturb natural features and would promote erosion and require extensive revegetation.
- Minimize grading and excavation by the careful fitting of roads, parking, and buildings to sites. Limit cut and fills and use naturally rounded tops and toes of slopes to diminish erosion. Avoid any grade changes within the drip line of any trees to be preserved.
- Avoid improper drainage practices that would have a strong negative impact not only on the site where the work is done, but also on land downstream. Preserve the natural drainage pattern of a site, which is the result primarily of its topography and vegetation.
- Ensure the surface of graded slopes is rough, not smooth and even. Rough slopes are easier to revegetate because the rough texture provides better seed establishment sites.
- Salvage and replace topsoil. This practice improves the planting medium and restores the native seed bank and soil microbiota.

Planting Design

This section of the guidelines addresses issues related to planting design and the introduction of new vegetation.

- Develop planting designs that replicate the patterns of naturally occurring plant communities.
- Ensure new plantings of trees, shrubs and groundcover are in groups of similar species, rather than alone or with a number of other species.
- Plant in clusters or with random spacing, rather than straight rows.
- Soften edges between existing vegetative patterns and road construction areas by using undulating clearing limits.
- Use indigenous low-growing shrubs and grasses within the clear zone width as established by MDT.
- Provide vegetation through riparian areas to provide cover for wildlife.
- Plant trees and shrubs at or near entrances to wildlife crossings to provide cover for wildlife and encourage use of the crossings. Provide trees and shrubs at all jump-outs where continuous fencing is required.
- Use vegetation in selected areas to screen undesirable views. Landscape planting for function and form can be an effective means of facilitating traffic and screening selected areas.
- Where horizontal changes in road alignment have been

incorporated, explore adding indigenous vegetation to help block glare of lights from oncoming traffic and control/enhance views.

- Blend new plantings into the existing landscape so that all traces of construction-wrought damage will vanish in a few years.
- Ensure new plantings receive appropriate care and maintenance through the plant establishment period, which is usually one to two years after planting.

Plant Materials

Use only indigenous plant materials. Species considered indigenous for purposes of the project are identified in the following plant list.

Riparian Areas

Trees

- *Betula papyrifera* (Paper Birch)
- *Picea engelmannii* (Engleman Spruce)
- *Populus trichocarpa* (Black Cottonwood)
- *Populus tremuloides* (Quacking Aspen)

Shrubs

- *Acer glabrum* (Rocky Mountain Maple)
- *Alnus incana* (Mountain Alder)
- *Amelanchier alnifolia* (Western Serviceberry)
- *Betula occidentalis* (Water Birch)
- *Clematis ligusticifolia* (Western Virgins-bower)
- *Crateagus douglassi* (Black Hawthorn)
- *Crataegus columbiana* (Columbia Hawthorn)
- *Cornus stolonifera* (Red-osier Dogwood)
- *Linnaea borealis* (Twinflower)
- *Lonicera involucrata* (Black Twin-berry)
- *Prunus virginiana* (Common Chokeberry)
- *Ribes americana* (Black Currant)
- *Rubus parviflorus* (Thimbleberry)
- *Salix bebbiana* (Bebb Willow)
- *Salix boothii* (Booth Willow)
- *Salix drummondiana* (Drummond Willow)



Paper Birch

*Wetland at
Ninepipe
showing
cattails,
reeds and
willows.*

